



January 17, 2001

L-2001-003  
10 CFR 50.90

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Supplement to Proposed License Amendments  
Dual Role Senior Reactor Operator/  
Shift Technical Advisor

By letter L-2000-188, dated November 28, 2000, Florida Power and Light Company (FPL) requested to amend Facility Operating Licenses DPR-67 for St. Lucie Unit 1 and NPF-16 for St. Lucie Unit 2 by changing TS Table 6.2.1, Minimum Shift Crew Composition with Two Separate Control Rooms and TS Section 6.3.1(2), Unit Staff Qualifications for the Shift Technical Advisor (STA). The proposed amendments would permit, as an alternative to the current dedicated STA, an STA qualified on-shift senior reactor operator (SRO) position to be combined with the required STA position.

On December 28, 2000, a telephone conversation among Mr. Richard Eckenrode, NRC NRR, NRC Project Manager, and FPL staff personnel resulted in an NRC request for minor word changes to the amendments. In response to the NRC, FPL has revised the proposed license amendments. Specifically, FPL has changed the amendments to further clarify that only STA qualified personnel will fill the dual role SRO/STA position.

Attachment 1 contains the NRC requested revisions to the original proposed amendments. The changes in the revised Attachment 1 remain bounded by the original No Significant Hazards Determination (Attachment 2 of FPL letter number L-2000-188). Attachments 3 and 4 contain copies of the affected Technical Specifications Table 6.2-1 marked up to show the changes.

The St. Lucie Facility Review Group and the FPL Company Nuclear Review Board have reviewed the NRC recommended changes to the proposed amendments. Copies of the NRC recommended changes to the proposed amendments are being forwarded to the State Designee for the State of Florida.

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FPL proposes to exercise either of the STA options permitted by the NRC *Policy Statement on Engineering Expertise on Shift* on a shift-by-shift basis. Due to personnel training and possible refueling outage impact, please issue the amendments to be effective on date of issuance and to be implemented within 120 days of receipt by FPL.

Please contact us if there are any questions about this submittal.

Very truly yours,



Rajiv S. Kundalkar  
Vice President  
St. Lucie Plant

RSK/GAC

Attachments

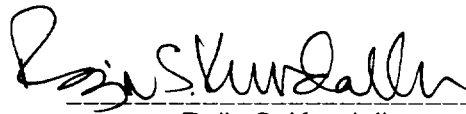
cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, St. Lucie Plant  
Mr. W. A. Passetti, Florida Department of Health

STATE OF FLORIDA        )  
  )    ss.  
COUNTY OF ST. LUCIE    )

Rajiv S. Kundalkar being first duly sworn, deposes and says:

That he is Vice President, St. Lucie Plant, for the Nuclear Division of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.

  
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Rajiv S. Kundalkar

STATE OF FLORIDA  
COUNTY OF St. Lucie

Sworn to and subscribed before me  
this 17 day of Jan., 2001

by Rajiv S. Kundalkar, who is personally known to me.

  
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Signature of Notary Public-State of Florida

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Name of Notary Public (Print, Type, or Stamp)



**Leslie J. Whitwell**  
MY COMMISSION # CC646183 EXPIRES  
May 12, 2001  
BONDED THRU TROY FAIN INSURANCE, INC.

## ATTACHMENT 1

### EVALUATION OF PROPOSED TECHNICAL SPECIFICATIONS CHANGES

#### Introduction

The proposed amendments to Facility Operating License DPR-67 for St. Lucie Unit 1 and NPF-16 for St. Lucie Unit 2 would revise TS Table 6.2.1., Minimum Shift Crew Composition with Two Separate Control Rooms and TS Section 6.3.1 (2), Unit Staff Qualifications for the Shift Technical Advisor (STA). The proposed amendments would permit, as an alternative to the current dedicated STA, an STA qualified on-shift senior reactor operator (SRO) position to be combined with the required STA position. Additionally, the proposed amendments would require the individual filling either the dedicated STA position or the combined SRO/STA position to meet the Technical Specifications educational alternatives described in Federal Register Notice 50 FR 43621, "Commission Policy Statement on Engineering Expertise on Shift." These proposed changes are in accordance with the recommendations in the NRC *Policy Statement on Engineering Expertise on Shift*, published on October 28, 1985 and transmitted to all power reactor licensees and applicants by NRC Generic Letter 86-04, dated February 13, 1986.

FPL proposes to exercise either of the STA options permitted by the policy statement on a shift-by-shift basis.

#### Description of Proposed Changes

- 1) TS Table 6.2-1, Page 6-4 (Unit 1) and 6-5 (Unit 2):

Add asterisks behind "STA" in the NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION rows for STA. Add a footnote "\*" shown at the bottom of page 6-4 (Unit 1) and 6-5 (Unit 2) which states:

**A single, onsite STA position shall be manned in MODE 1, 2, 3, and 4 unless the Shift Supervisor meets the qualifications for the STA as required by Technical Specification 6.3.1 or an individual on each Unit (Unit 1, Unit 2) with a Senior Reactor Operator's License meets the qualifications for the STA as required by Technical Specification 6.3.1.**

Replace "a" in the NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION WITH (UNIT 1, UNIT 2) IN MODE 1, 2, 3, OR 4 for STA row with "c". Add a footnote "c" shown at the bottom of page 6-4 (Unit 1) and 6-5 (Unit 2) which states:

**If STA position is filled by an STA qualified Shift Supervisor or dedicated STA, then the individual may fill the same position on (Unit 1, Unit 2).**

Replacement copies of TS page 6-4 (Unit 1) and page 6-5 (Unit 2) marked to show the proposed changes are contained in Attachments 3 and 4, respectively.

2) TS Section 6.3.1 (2), Page 6-6 (Unit 1) and 6-6 (Unit 2): replace section (2) with the following:

**(2) the Shift Technical Advisor who shall have specific training in plant design and plant operating characteristics, including transients and accidents, and any of the following educational requirements:**

- **Bachelor's degree in engineering from an accredited institution; or**
- **Professional Engineer's (PE) license obtained by successful completion of the PE examination; or**
- **Bachelor's degree in engineering technology from an accredited institution, including course work in the physical, mathematical, or engineering sciences; or**
- **Bachelor's degree in a physical science from an accredited institution, including course work in the physical, mathematical, or engineering sciences.**

Copies of TS page 6-6 (Unit 1) and page 6-6 (Unit 2) are contained in the original proposed license amendments submittal (FPL letter number L-2000-188).

### **Background**

In response to the accident at Three Mile Island in March 1979, the NRC required that each licensee provide an on-shift advisor to the shift supervisor. The STA requirement was communicated to licensees in NUREG-0578 (July 1979), the H. R. Denton letter (October 1979), and NUREG-0737, Item I.A.1.1 (November 1980). The STA function and qualification requirements were also defined. The STA function was to provide engineering and accident assessment expertise and advice to the shift supervisor in the event of abnormal or accident conditions. The qualification requirements include a bachelor's degree or equivalent, plus specific training in plant design, layout and controls. Normal duties of the STA pertain to the engineering aspects of assuring safe operations of the plant, including the review and evaluation of operating experience.

NUREG-0737, I.A.1.1 did not establish detailed elements of the academic and training requirements beyond the guidance provided in H. R. Denton's letter dated October 1979, i.e., the qualifications stated above. An Institute of Nuclear Power Operations (INPO) document, "Nuclear Power Plant Shift Technical Advisor" (4/30/80), was attached to NUREG-0737 as Appendix C, which outlined more specific education, training, and experience requirements for STAs. The NRC defined Appendix C as acceptable guidance for planning a long term STA program, but did not make the INPO document a requirement.

On September 25, 1985, the Commission approved the "Commission Policy Statement on Engineering Expertise on Shift," which was published in the Federal Register, 50 FR 11147 and 50 FR 43621 (October 1985). The Commission's policy statement gave licensees two options for meeting the STA requirements. Option 1 permits licensees to combine one of the required on-shift SRO positions with the STA position into a "dual role" position (SRO/STA). The SRO/STA must hold a bachelor's degree in engineering, engineering technology, or physical science, or must hold a professional engineer license. Option 2 permits a licensee to satisfy the policy by placing on each shift a "dedicated STA" who meets the education and knowledge criteria of NUREG-0737, Item I.A.1.1, and who participates in normal shift activities.

On February 13, 1986, the NRC staff issued Generic Letter 86-04, *Policy Statement on Engineering Expertise on Shift*, to send licensees a copy of the Commission's policy statement. In the generic letter, the staff also asked licensees to submit their plans for STA implementation. FPL responded to GL 86-04, on June 9, 1986 (Letter L-86-231), stating the current FPL program for providing engineering expertise on shift is consistent with Option 2 in the October 28, 1985 Federal Register Notice (50 FR 43621), and meets the criteria of NUREG-0737, Item I.A.1.1.

The NRC Office for Analysis and Evaluation of Operational Data (AEOD) conducted human performance studies of events at operating power reactors. On August 5, 1991 and January 21, 1992, the NRC staff briefed the Commission on this program. This information is published in SECY-92-026. Based on large differences identified in licensee implementation of STA programs, the staff identified that it is important for the STA to participate in normal shift activities, including participating in shift turnovers, reviewing plant logs, and maintaining awareness of plant configurations and status.

The NRC policy statement states that either option may be used on each shift. If the first option is used, the person filling the dual role SRO/STA position, in addition to holding an active SRO license on the unit(s) assigned, will be required to meet the criteria for education and training specified in the NRC policy statement. The education and training requirements for the dual role SRO/STA position include requirements currently applicable to the STA as described in the St. Lucie Units 1 and 2 Technical Specifications (TS) 6.3.1, except that the educational requirements for the dual role SRO/STA may be satisfied by any of the following four alternatives:

- 1) Bachelor's degree in engineering from an accredited institution; or,
- 2) Professional Engineer's (PE) license obtained by successful completion of the PE exam; or,
- 3) Bachelor's degree in engineering technology from an accrediting institution, including course work in physical, mathematical, or engineering sciences; or,
- 4) Bachelor's degree in physical science from an accredited institution including course work in physical, mathematical, or engineering sciences.

### **Discussion of Proposed Technical Specifications Changes**

While the numbers of SROs, reactor operators (ROs), and non-licensed operators on-shift at St. Lucie Plant normally exceed the minimum shift manning requirements specified in TS Table 6.2-1 and 10 CFR 50.54(m)(2), the proposed TS changes to permit a dual role SRO/STA have been evaluated for the conditions in which the shift staffing is at the minimum required level permitted by TS Table 6.2-1.

The dual role SRO/STA position option recommended by the NRC policy statement combines one of the required SRO positions with the STA position; therefore, use of the dual role SRO/STA position option will not result in the need to assign an additional SRO to meet minimum shift staffing requirements (i.e., the two SROs currently required by TS Table 6.2-1). The NRC policy statement specifically states that the number of shift personnel specified to meet 10 CFR 50.54(m) (2) and reflected in TS Table 6.2-1 is sufficient to allow the individual filling the dual role SRO/STA position to provide both accident assessment expertise, and to analyze and respond to off-normal occurrences, when needed.

The purpose of the STA position is to ensure that engineering and accident assessment expertise is available on each shift. The NRC policy statement concludes that the dual role SRO/STA position can provide this expertise and simultaneously function as one of the SROs required to meet staffing levels in 10 CFR 50.54(m) (2) and TS Table 6.2-1.

### **Control Room Location**

St. Lucie Plant is a dual unit site with two separate control rooms. The TS Table 6.2-1 minimum shift staffing with two units operating consists of: one Shift Supervisor with an SRO license (holding a license on both units); one SRO for each unit holding a license on his/her assigned unit (Unit Supervisor); four licensed ROs; four non-licensed plant operators; and one STA. This minimum staffing level is based on meeting the following criteria:

- one SRO in the control room of each unit at all times when either unit is operating;
- one SRO with overall control room command function responsibilities for the site available for relief on either unit;
- one RO at the controls for each operating unit with an RO in each control room available for relief on that unit;
- two non-licensed plant operators assigned to each unit; and,
- one STA assigned to both units.

Upon implementation of the proposed dual role SRO/STA position option, the staffing necessary to achieve safe shutdown will continue to comply with regulatory requirements.

**Implementation**

FPL intends to exercise either of the two options permitted by the NRC *Policy Statement on Engineering Expertise on Shift*, published on October 28, 1985 on a shift-by-shift basis. In that light, FPL will have an STA on each shift fully meeting the unit staff qualification requirements of the proposed revision to TS 6.3.1. Staff positions which will be considered as meeting the conditions of this license amendment are the STA qualified Shift Supervisor, STA qualified unit assigned Senior Reactor Operator, and dedicated STA.

If option 1 is in use and an accident was to occur, then the dual role STA qualified SRO scenarios below describe how STA coverage will be provided:

<b>Position(s) Fulfilling Dual Role STA Qualified SRO</b>	<b>Actions to be Taken to Ensure the Presence of the Dual Role STA Qualified SRO on the Transient/Accident Unit</b>
Single Unit Event / STA Qualified SRO on Unit 1 and Unit 2	The unit assigned STA qualified SRO provides engineering and accident assessment expertise for the accident/transient unit.
Single Unit Event / STA Qualified Shift Supervisor	The STA qualified shift supervisor transits to the accident/transient unit in accordance with plant procedures and provides engineering and accident assessment expertise for the accident/transient unit.
Dual Unit Event / STA Qualified SRO on Unit 1 and Unit 2	Each unit assigned STA qualified SRO provides engineering and accident assessment expertise for his/her assigned accident/transient unit.
Dual Unit Event / STA Qualified Shift Supervisor	The STA qualified shift supervisor transits to the most affected unit control room in accordance with plant procedures and provides engineering and accident assessment expertise for both accident/transient units. The STA qualified shift supervisor maintains awareness of the other unit's accident/transient conditions through monitoring of available computerized data, verbal communications, etc.



If option 2 is in use, then an individual qualified as an STA will be available on-site (consistent with the current TS requirements for St. Lucie Units 1 and 2) to provide engineering and accident assessment expertise, as necessary.

### **Conclusion**

These proposed changes to the St. Lucie Units 1 and 2 Technical Specifications is in accordance with the recommendations in the NRC *Policy Statement on Engineering Expertise on Shift* published on October 28, 1985 and transmitted to all power reactor licensees and applicants by NRC Generic Letter 86-04, of the same title as the October 28, 1985 policy statement, dated February 13, 1986. If approved, and as permitted by the NRC policy statement, St. Lucie Units 1 and 2 will exercise either of the two options permitted by the policy statement on each operating shift, which are:

- 1) to combine one of the STA qualified on-shift licensed SRO positions and the STA position (i.e., dual role SRO/STA); or
- 2) to have a dedicated STA on-shift in accordance with the description in NUREG-0737 (i.e., Item I.A.1.1).

**ATTACHMENT 2**

**DETERMINATION OF NO SIGNIFICANT HAZARD CONSIDERATION**

The changes in the revised Attachment 1 remains bounded by the original No Significant Hazards Determination (Attachment 2 in the original proposed license amendments, FPL letter number L-2000-188).

**ATTACHMENT 3**

**ST. LUCIE UNIT 1 MARKED-UP TECHNICAL SPECIFICATIONS PAGE**

Table 6.2-1

MINIMUM SHIFT CREW COMPOSITION

TWO UNITS WITH TWO SEPARATE CONTROL ROOMS

WITH UNIT 2 IN MODE 5 OR 6 OR DEFUELED		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODE 1, 2, 3 or 4	MODE 5 or 6
SS (SRO)	1 <sup>a</sup>	1 <sup>a</sup>
SRO	1	None
RO	2	1
AO *	2	2 <sup>b</sup>
STA	1	None

WITH UNIT 2 IN MODE 1, 2, 3, or 4		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODE 1, 2, 3, or 4	MODE 5 or 6
SS (SRO)	1 <sup>a</sup>	1 <sup>a</sup>
SRO	1	None
RO	2	1
AO *	2 <sup>c</sup>	1
STA	1	None

SS - Shift Supervisor with a Senior Reactor Operator's License on Unit 1  
 SRO - Individual with a Senior Reactor Operator's License on Unit 1  
 STA - Shift Technical Advisor  
 RO - Individual with a Reactor Operator's License on Unit 1.  
 AO - Auxiliary Operator

Except for the Shift Supervisor, the Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 1, 2, 3 or 4, an individual (other than the Shift Technical Advisor) with a valid SRO license shall be designated to assume the Control Room command function. During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 5 or 6, an individual with a valid SRO or RO license shall be designated to assume the Control Room command function.

- a/ Individual may fill the same position on Unit 2.
- b/ One of the two required individuals may fill the same position on Unit 2.
- c/ IF STA POSITION IS FILLED BY AN STA QUALIFIED SHIFT SUPERVISOR OR DEDICATED STA, THEN THE INDIVIDUAL MAY FILL THE SAME POSITION ON UNIT 2.

A SINGLE, DEDICATED STA POSITION SHALL BE MAINTAINED IN MODE 1, 2, 3 AND 4 UNLESS THE SHIFT SUPERVISOR MEETS THE QUALIFICATIONS FOR THE STA AS REQUIRED BY TECHNICAL SPECIFICATION 6.3.1 OR AN INDIVIDUAL ON EACH UNIT WITH A SENIOR REACTOR OPERATOR'S LICENSE MEETS THE QUALIFICATIONS FOR THE STA AS REQUIRED BY TECHNICAL SPECIFICATION 6.3.1.

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**ATTACHMENT 4**

**ST. LUCIE UNIT 2 MARKED-UP TECHNICAL SPECIFICATIONS PAGE**

Page 6-5

Table 6.2-1  
 MINIMUM SHIFT CREW COMPOSITION  
 TWO UNITS WITH TWO SEPARATE CONTROL ROOMS

WITH UNIT 1 IN MODE 5 OR 6 OR DEFUELED		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODE 1, 2, 3, or 4	MODE 5 or 6
SS (SRO)	1 <sup>a</sup>	1 <sup>a</sup>
SRO	1	None
RO	2	1 <sup>b</sup>
AO	2	2 <sup>b</sup>
STA	1	None

WITH UNIT 1 IN MODE 1, 2, 3 OR 4		
POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODE 1, 2, 3, or 4	MODE 5 or 6
SS (SRO)	1 <sup>a</sup>	1 <sup>a</sup>
SRO	1	None
RO	2	1
AO	2	1
STA	1 <sup>a</sup>	None

- SS - Shift Supervisor with a Senior Reactor Operator's License on Unit 2
- SRO - Individual with a Senior Reactor Operator's License on Unit 2
- RO - Individual with a Reactor Operator's License on Unit 2
- AO - Auxiliary Operator
- STA - Shift Technical Advisor

Except for the Shift Supervisor, the Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 1, 2, 3 or 4, an individual (other than the Shift Technical Advisor) with a valid SRO license shall be designated to assume the Control Room command function. During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 5 or 6, an individual with a valid SRO or RO license shall be designated to assume the Control Room command function.

- a/ Individual may fill the same position on Unit 1
- b/ One of the two required individuals may fill the same position on Unit 1.
- c/ IF STA POSITION IS FILLED BY AN STA QUALIFIED SHIFT SUPERVISOR OR DEDICATED STA THEN THE INDIVIDUAL MAY FILL THE SAME POSITION ON UNIT 1.

A SINGLE, CONSISTENT STA POSITION SHALL BE MAINTAINED IN MODE 1, 2, 3, AND 4 UNLESS THE SHIFT SUPERVISOR MEETS THE QUALIFICATIONS FOR THE STA AS REQUIRED BY TECHNICAL SPECIFICATIONS G.3.1 OR AN INDIVIDUAL ON EACH UNIT WITH A SENIOR REACTOR OPERATOR'S LICENSE MEETS THE QUALIFICATIONS FOR THE STA AS REQUIRED BY TECHNICAL SPECIFICATIONS G.3.1.

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